REMARKS

The Office Action dated February 8, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 11, 21, 24, 27, and 29 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added and no new issues are raised which require further consideration or search. Therefore, claims 1-30 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claims 1-30 under 35 U.S.C. §102(e) as allegedly anticipated by Galand, *et al.* (U.S. Patent No. 6,424,624) ("Galand"). The Office alleged that Galand discloses or suggests every claim feature recited in claims 1-30. The rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2-10 are dependent, recites a method of managing flow of datagram traffic. The method includes providing a first networked device that is operably connected to a second networked device, and transferring datagrams from a first port of the first device to a first port of the second device using a pathway that is operably connected to a second port of the first device and a second port of the second device. The method further includes selectively pausing an individual port on the first device that is causing over-subscription of the first port of the second device, and transferring datagrams from a third port of the first device to the first port of the second device using

the pathway that is operably connected to the second port of the first device and the second port of the second device, while the individual port on the first device is paused.

Claim 11, upon which claims 12-20 are dependent, recites a method of managing flow of datagram traffic. The method includes providing a first networked device that is operably connected to a second networked device, and transferring datagrams from a first port of the first device to a first port of the second device using a pathway that is operably connected to a second port of the first device and a second port of the second device. The method further includes signaling the first port of the first device to send fewer datagrams to the first port of the second device when an over-subscription is detected at the first port of the second device, and transferring datagrams from a third port of the first device to the first port of the second device using the pathway that is operably connected to the second port of the first device and the second port of the second device, while the first port of the first device is sending fewer datagrams to the first port of the second device.

Claim 21, upon which claims 22-23 are dependent, recites a communications system, which includes a first data distribution means operably connected to a second data distribution means, and a first communications means for transferring datagrams from a first port of the first data distribution means to a first port of the second data distribution means. The system further includes control means for selectively pausing individual ports that are causing over-subscription of the first port of the second data distribution means, and means for transferring datagrams from a second port of the first

data distribution means to the first port of the second data distribution means, while the individual ports are paused.

Claim 24, upon which claims 25-26 are dependent, recites a communications system, which includes a first data distribution means operably connected to a second data distribution means for distributing datagrams over a network, and first communications means for transferring the datagrams from a first port of the first data distribution means to a first port of the second data distribution means. The system further includes control means for signaling the first port of the first data distribution means to send fewer datagrams to the first port of the second data distribution means when an over-subscription is detected at the first port of the second data distribution means, and means for transferring datagrams from a second port of the first data distribution means to the first port of the second data distribution means, while the first port of the first data distribution means is sending fewer datagrams to the first port of the second data distribution means.

Claim 27, upon which claim 28 is dependent, recites a communications system, which includes a first device operably connected to a second device, and a first controller configured to transfer datagrams from a first port of the first device to a first port of the second device. The system further includes a second controller configured to selectively pause individual ports in the first device that are contributing to over-subscription of the first port of the second device. The first controller is further configured to transfer

diagrams from a second port of the first device to the first port of the second device, while the individual ports are paused.

Claim 29, upon which claim 30 is dependent, recites a communications system, which includes a first device operably connected to a second device, and a first controller configured to transfer datagrams from a first port of the first device to a first port of the second device. The system further includes a second controller configured to signal the first port of the first device to send fewer datagrams to the first port of the second device when an over-subscription is detected at the first port of the second device. The first controller is further configured to transfer datagrams from at least a second port of the first device to the first port of the second device, while the first port of the first device is sending fewer datagrams to the second port of the second device.

Thus, according to embodiments of the invention, over-subscription of one port on one network device is prevented without effectively shutting down an entire data distribution network, or even a portion of. Furthermore, according to embodiments of the invention, better flow control of datagrams over distributions is provided.

As will be discussed below, Galand fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Galand generally describes a system to perform congestion detection and flow control in high speed digital packet switching network carrying discardable and non-discardable traffic. If a congestion-indicating bit is detected in a received packet, a backward congestion indicator is set in packets flowing from the destination system to

the source system over a second connection. The source system integrates the number of backward congestion indicators received over successive periods of time using a count-up, count-down counter. Specific congestion control actions are taken at the source system as a function of the counter state at the end of each of the successive periods of time. The congestion control actions may include increasing or decreasing the bandwidth allocated to discardable traffic intended to be delivered over the first connection. (see Galand at Abstract).

Applicants respectfully submit that Galand fails to disclose, teach, or suggest, all of the elements of the present claims. For example, Galand fails to disclose, teach, or suggest, at least, "transferring datagrams from a third port of the first device to the first port of the second device using the pathway that is operably connected to the second port of the first device and the second port of the second device, while the individual port on the first device is paused," as recited in claim 1, and similarly recited in claims 21 and 27; and "transferring datagrams from a third port of the first device to the first port of the second device using the pathway that is operably connected to the second port of the first device and the second port of the second device, while the first port of the first device is sending fewer datagrams to the first port of the second device," as recited in claim 11, and similarly recited in claims 24 and 29.

As described above, Galand discloses a system to perform congestion detection and flow control in high speed digital packet switching network. Galand discloses that the packet transmission system includes access nodes/ports and transit nodes, the nodes

being interconnected by links (trunks). (see Galand at col. 4, lines 18-24; Figure 1). Galand further discloses an entry access node/port 23, through which a source user 20 is attached to the network, an exit access node/port 24, though which the destination user 21 is attached to the network, a forward path via transit nodes 25 and 26 which connect entry access node 23 and exit access node 24, and a return path 27. (see Galand at col. 6, lines 26-38; Figure 2). Packets are transferred from the source 20 to the destination 21 via entry access node 23, transit nodes 25 and 26, and exit access node 24. Furthermore, packets are transferred from destination 21 to source 20 via exit access node 24, return path 27, and entry access node 23.

Galand further discloses that once a threshold level for denoting congestion in a network node has been reached in any one of the network nodes of the forward path between the source 20 and destination 21, a congestion indication EFCI bit is set to "1" in the header of the packet which triggered the congestion threshold level, all the way to the exit access node 24. When the exit access node 24 detects the congestion indication EFCI bit, it marks each packet in the backwards flow (i.e. each packet being transferred from exit access node 24 back to entry access node 23) with Returned Congestion Information (RCI), by setting a BECN bit in a FR packet header to "1." Once the entry access port 23 receives the packet with the RCI, it drops the transmission rate on the identified congested path in a single large step, based on a multiplicative decrease of the sending rate, and gradually increases the transmission rate based on an additive increase. (see Galand at col. 7, line 60 – col. 8, line 28).

As described above, Galand merely discloses that the original source of the packets that pass through entry access node 23 is source 20. There is no suggestion that any packets originate from a node which is downstream from entry access node 23. Furthermore, Galand discloses that once congestion is detected in a path between an entry access node, and an exit access node, the entry access node lowers the transmission rate for <u>all traffic that is transferred from the entry access node to the exit access node</u>. In other words, no matter what the original source of the packet is, once the packet enters the entry access node, where congestion has been detected, said packet will be transferred at the lower transmission rate. There is simply no disclosure, or suggestion, of selectively lowering the transmission rate for certain packets, while transmitting other packets at a normal rate, based on the source of the packet. Thus, Galand's method of combating congestion, is an all-or nothing solution, which lowers the transmission rate of <u>all packets</u>.

In contrast, according to an embodiment of the invention, once an over-subscription condition is detected by a memory unit controller for a destination port, a first port which sent the datagram that triggered the over-subscription condition is identified, and the memory unit controller sends one or more pause frames to said first port, thus temporary preventing said first port from forwarding any additional datagrams. However, even while said first port is paused, and cannot send any datagrams, a second port is able to forward datagrams to the destination port, despite the destination port being over-subscribed. (see Specification at paragraphs 0041-0043). Thus, the

congestion solution according to embodiments of the invention is not an all-or-nothing solution, as the memory unit controller either pauses, or signals to send fewer datagrams, individual nodes of a network device, while allowing remaining nodes of the network device to continue transmitting datagrams.

Therefore, for at least the reasons discussed above, Galand fails to disclose, teach, or suggest, all of the elements of claims 1, 11, 21, 24, 27, and 29. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 2-10 depend upon claim 1. Claims 12-20 depend upon claim 11. Claims 22-23 depend upon claim 21. Claims 25-26 depend upon claim 24. Claim 28 depends upon claim 27. Claim 30 depends upon claim 29. Thus, Applicants respectfully submit that claims 2-10, 12-20, 22-23, 25-26, 28, and 30 should be allowed for at least their dependence upon claims 1, 11, 21, 24, 27, and 29, respectively, and for the specific elements recited therein.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art references fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-30 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Reg. No. 46,621

Majid AlBassam
Registration No. 54,749

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

KMM:dlh